What is claimed:

1. An apparatus for automatically measuring the pH of soil at a relatively large number of places in the field, comprising a chassis suitable for towing by a standard tractor; a plurality of wheels; a tank for holding water; a compressed air tank; at least one shank for exposing the soil at the desired sampling depth; at least one pH sensor, each including at least one probe; a probe assembly for each probe, including a sampling platform for collecting soil from pre-selected soil depths and bringing it into contact with the probe, an actuator for moving the sampling platform between an extended position in which a soil sample is collected and a retracted position in which the soil sample is in contact with the probe, and one or more nozzles connected by hoses to the tanks of water for cleaning the probe between measurements by directing water onto it; and an onboard computer for collecting and storing the data.

